

PATENT
Docket No. 150.01180102IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Vaartstra) Group Art Unit: Unassigned
Serial No.: 10/771,050) Examiner: Unassigned
Confirmation No.: Unassigned)
Filed: February 3, 2004)
For: METHODS FOR PLANARIZATION OF METAL-CONTAINING SURFACES
USING HALOGENS AND HALIDE SALTS

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April 26, 2004
DateSignature: [Signature]
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INFORMATION DISCLOSURE STATEMENTCommissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with C.F.R. §§ 1.97 *et. seq.*, the materials enclosed herewith are brought to the attention of the Examiner as possibly being of interest in connection with the above-identified patent application. Per M.P.E.P. § 609, the information cited in the present Information Disclosure Statement shall not be construed to be an admission that the information is, or is considered to be, material to patentability. Consideration of each of the documents listed on the attached 1449 form(s) is respectfully requested. As this patent application was filed after June 30, 2003, copies of the U.S. patents and U.S. patent application publications listed on the attached 1449 form(s) have not been submitted). Pursuant to the provisions of M.P.E.P. § 609, Applicant further requests that a copy of the 1449 form(s), marked as being considered and initialed by the Examiner, be returned with the next Official Communication.

This application is a continuation of U.S. Patent Application Serial No. 10/771,050, filed February 3, 2004. In accordance with 37 C.F.R. §1.98(d), copies of documents previously cited by or submitted to the U.S. Patent and Trademark Office in connection with Applicant's prior application(s) listed above, are not included herewith.

Information Disclosure Statement

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It is believed that no fee is due, as this Information Disclosure Statement is filed prior to the receipt of any Action on the merits. However, in the event a fee is due, please charge any fee or credit any overpayment to Account No. 13-4895.

The Examiner is invited to contact Applicant's Representatives at the below-listed telephone number, if they can be of any assistance during prosecution of the present application.

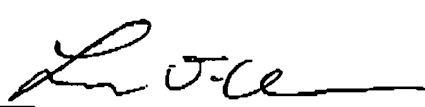
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Name: SARA E. OLSONApril 26, 2004
Date

Respectfully submitted for
Brian A. Vaartstra

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OMB No. 0651-0011

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INFORMATION DISCLOSURE STATEMENT	Atty. Docket N .: 150.01180102	Serial No.: 10/771,050
	Applicant(s): Brian A. Vaartstra	Confirmation No.: Unassigned
	Application Filing Date: February 3, 2004	Group: Unassigned
	Information Disclosure Statement mailed: <u>April 20</u> , 2004	

U.S. PATENT DOCUMENTS

Examiner Initial	Copy Enclosed	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
		4,035,500	07/12/77	Drafter Jr.			
		4,297,436	10/27/81	Kubortera et al.			
		4,670,306	06/02/87	Salem			
		4,747,907	05/31/88	Acocella et al.			
		4,992,137	02/12/91	Cathey, Jr. et al.			
		5,254,217	10/19/93	Maniar et al.			
		5,318,927	06/07/94	Sandhu et al.			
		5,378,492	01/03/95	Mashiko			
		5,380,401	01/10/95	Jones et al.			
		5,392,189	02/21/95	Fazan et al.			
		5,480,854	01/06/96	Rajaram et al.			
		5,527,423	06/18/96	Neville et al.			
		5,575,885	11/19/96	Hirabayashi et al.			
		5,692,950	12/02/97	Rutherford et al.			
		5,695,384	12/09/97	Beratan			
		5,700,383	12/23/97	Feller et al.			
		5,711,851	01/27/98	Blalock et al.			
		5,786,259	07/28/98	Kang			

EXAMINER	Date Considered
<small>*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</small>	

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Examiner Initial	Copy Enclosed	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
		5,888,906	03/30/99	Sandhu et al.			
		5,916,855	06/29/99	Avanzino et al.			
		5,935,871	08/10/99	Farkas et al.			
		5,954,997	09/21/99	Kaufman et al.			
		5,958,794	09/28/99	Bruxvoort et al.			
		5,976,928	11/02/99	Kirlin et al.			
		5,981,454	11/9/99	Small			
		5,989,988	11/23/99	linuma et al.			
		6,015,506	01/18/00	Streinz et al.			
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		6,143,191	11/07/00	Baum et al.			
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		6,149,828	11/21/00	Vaartstra			
		6,211,034	04/03/01	Visokay et al.			
		6,261,157	07/17/01	Bajaj et al.			
		6,278,153	08/21/01	Kikuchi et al.			

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		6,290,736	09/18/01	Evans			
		6,306,012	10/23/01	Sabde			
		6,346,741	02/12/02	Van Buskirk et al.			
		6,368,518	04/09/02	Vaartstra			
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		6,476,491	11/05/02	Harada et al.			
		6,527,622	03/04/03	Brusic et al.			
		6,527,818	03/04/03	Hattori et al.			
		6,537,462	03/25/03	Westmoreland			
		6,589,100	07/08/03	Moeggenborg et al.			
		6,730,592	05/04/04	Vaartstra			
		2001/0006031	07/05/01	Tsuchiya et al.			
		2001/0023701	09/27/01	Aoki et al.			
		2002/0017063	02/14/02	Beitel et al.			
		2002/0008265	01/24/02	Beitel et al.			
		2002/0050322	05/02/02	Kunisawa et al.			
		2002/0081853	06/27/02	Beitel et al.			

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		2002/0019088	02/14/02	Basceri et al.			
		2002/0111026	08/15/02	Small et al.			
		2002/0111027	08/15/02	Sachan et al.			
		2002/0151177	10/17/02	Cherian et al.			
		2002/0039839	04/04/02	Thomas et al.			
		2003/0121891	07/03/03	Westmoreland			
		2003/0119316	06/26/03	Klein et al.			
		2003/0119426	06/26/03	Sabde et al.			
		2003/0119321	06/26/03	Unhlenbrock et al.			
		2003/0119319	06/26/03	Sinha et al.			
		2003/0119304	06/26/03	Vaartstra			
		2003/0138561	07/24/03	Westmoreland			

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Examiner Initial	Copy Enclosed	Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
		WO 98/06541	02/19/98	PCT				
		WO 98/36045	08/20/98	PCT				
		WO 99/27581	06/03/99	PCT				
		WO 99/53532	10/21/99	PCT				
		WO 00/31794	06/02/00	PCT				

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		WO 01/44396	06/21/00	PCT				
		WO 00/77107	12/21/01	PCT				
		WO 02/084718	10/24/02	PCT				
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		1 156 091	11/21/01	Europe				
		1 123 956	08/16/01	Europe				
		2000 200782	07/18/00	Japan (English Abstract Included)				

OTHER DOCUMENTS (Including Authors, Title, Date, Pertinent Papers, etc.)

Examiner Initial	Copy Enclosed	Document Description
		Canterford et al., "Chapter 9: Rhodium and Iridium," <i>Halides of the Transition Elements, Halides of the Second and Third Row Transition Metals</i> , John Wiley & Sons, New York, NY, 1968; pgs. 346-357, publication page, title page (14 pages total).
		DeOrnellas et al., "Challenges for Plasma Etch Integration of Ferroelectric Capacitors in FeRAM's and DRAM's," <i>Integrated Ferroelectrics</i> , 1997;17:395-402.
		DeOrnellas et al., "Plasma Etch of Ferroelectric Capacitors in FeRAMs and DRAMs," <i>Semiconductor International</i> , 1997 Sept.; pgs. 103-104, 106 and 108.
		Ginzburg et al., <i>Analytical Chemistry of Platinum Metals</i> , John Wiley & Sons, New York, cover pg., and 14-15.
		Kim et al., "Chemical Dry Etching of Platinum Using Cl ₂ /CO Gas Mixture," <i>Chem. Mater.</i> , 1998;10:3576-3582.

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		Kwon et al., "Etching properties of Pt thin films by inductively coupled plasma," <i>J. Vac. Sci. Technol.</i> , 1998;A 16(5):2772-6.
		Nakao, "Dissolution of Noble Metals in Halogen-Halide-Polar Organic Solvent Systems," <i>J. Chem. Soc., Chem. Commun.</i> , 1992 March 1; 5:426-7.
		Weast et al., "CRC Handbook of Chemistry and Physics," Chemical Rubber Publishing Company, 1989: D151-154
		Wilberg, <i>Lehrbuch der Anorganischen Chemie</i> , Walter de Gruyter, Berlin, 1985, pg. 1118 (Translation of First Paragraph Only)
		Xu et al., "Chemical Vapor Deposition (CVD) of Iridium and Platinum Films and Gas-Phase Chemical Etching of Iridium Thin Films," <i>Mat. Res. Soc. Symp. Proc.</i> , 1999;541:129-139.
		Webster's II, New Riverside University Dictionary, 1984: pgs. 258,842

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